Remarks

Applicants have amended Claim 35 to clarify the structure of the monitoring sensor. With reference to Fig. 1, the clarifying language becomes evident. In that regard, Claim 1 now recites a T-shaped member including a main pipe portion having a lubricant passage connected to the lubricant feed pipe and a joint pipe portion extending substantially vertically from the main pipe portion. Also, there is a detector insertion portion having a passageway that extends substantially vertically from a middle portion of the passage in the joint pipe portion. Again, this is all readily seen in Fig. 1. Entry into the official file is respectfully requested.

Claim 37 has been amended to include the additional steps of detecting voltage of the electrical signal and performing peak hold processing on the detected voltage to obtain a peak voltage. Support may be found throughout the Applicants' Substitute Specification such as in paragraph [0218], for example. Entry into the official file and consideration on the merits is respectfully requested.

Claims 35-36 stand rejected under 35 USC §102 as being anticipated by JP '466. The Applicants note with appreciation the Examiner's helpful comments hypothetically applying JP '466 against those claims. The Applicants nonetheless respectfully submit that JP '466 fails to explicitly or implicitly disclose all of the subject matter of those claims.

To further assist in understanding the disclosure of JP '466, which is in Japanese, the Applicants note that Claim 1 of that disclosure recites the following:

> "A liquid flow detecting device characterized in that
>
> a piezoelectric device (10) is arranged to a joint pipe (1) such that the end portion of the piezoelectric device projects into the path (1a) of the joint pipe;

a bore (8) is formed at the periphery of the attaching portion of the piezoelectric transducer to allow the piezoelectric device to move into the liquid flow direction."

Also, the Applicants note that the reference numerals described with respect to Fig. 1 are as follows:

1: joint pipe, 1a: path of the joint pipe, 5: venture portion

7: attaching bore, 8: bore

10: piezoelectric device, 11: substrate

12: piezoelectric device plate, 13: guard plate 14: epoxy resin

JP '466 discloses joint pipe 1 having bore 8 with a guard plate 13 and epoxy resin 14 as shown in Fig. 1. However, JP '466 does not disclose the Applicants' claimed T-shaped member comprising a main pipe portion and a joint pipe portion as recited in Claim 35 and as shown in an exemplary manner as T-shaped pipe joint 2 having a main pipe 2a and a joint portion 2b. Instead, the JP '466 structure is quite different. Referring in particular to Fig. 3 of JP '466, it can be seen that there is a portion of the joint pipe 1 which is essentially a belt around joint pipe 1 and that belt houses the attaching bore 7 and the piezoelectric device 10. It should be noted in that regard that the belt is located circumferentially around the entire joint pipe 1.

This is sharply contrasted to the Applicants' Claim 35 which recites a T-shaped member including a main pipe portion having a lubricant passage connected to the lubricant feed pipe and a joint pipe portion extending substantially vertically from the main pipe portion. This as mentioned above is shown in exemplary form in the Applicants' claimed Fig. 1. JP '466 does not do this. If JP '466 were to have a structure that would be similar to the Applicants, that structure would have to be changed completely and would need to appear in the attached Exhibit A which is a modified form of Fig. 3 of JP '466. In other words, the JP '466 structure would

have to be changed to remove the "belt" and only have a joint pipe portion as labeled by the structure shown with the reference letter "x."

Thus, the Applicants respectfully submit that this structure is actually very different. Further, the Applicants have discovered that there is an advantage to the Applicants' approach that is not disclosed in JP '466. Comparing the JP '466 device as shown in Fig. 1 to that of the Applicants' Fig. 1, it can be seen that the Applicants' piezoelectric element is longer. This obtains a high output voltage. This is an advantageous feature. However, the Applicants structure allows for the use of a long piezoelectric element without increasing the thickness of the joint pipe itself. This is sharply contrasted to JP '466 which would require a serious increase of the joint pipe to make the piezoelectric element longer. This would result in a highly undesirable increase in the total weight of the detecting device. That would be a disadvantageous construction and would be avoided by those skilled in the art. Withdrawal of the rejection is respectfully requested.

Claims 37-40 stand rejected under 35 USC §103 over the hypothetical combination of Rafei with JP '466. The Applicants again note with appreciation the Examiner's detailed comments hypothetically applying the combination against those claims. The Applicants nonetheless respectfully submit that the combination still fails to disclose, teach or suggest the Applicants' subject matter as recited in Claims 37-40. Reasons are set forth below.

The fundamental disclosure of JP '466 has been described above. There is, however, no disclosure concerning processing the detected electrical signal. This description simply does not exist in JP '466.

On the other hand, the Applicants respectfully submit that Rafei does nothing to cure the deficiencies of JP '466. Rafei does not disclose the claimed peak hold processing on the

detected voltage. Thus, even if one skilled in the art were to hypothetically combine Rafei with JP '466, the resulting methodology would still fail to disclose the peak hold processing on the detected voltage as specifically recited in Claim 37. Thus, the combination would still be quite short from what the Applicants claim in Claims 37-40. The Applicants therefore respectfully submit that the §103 rejection cannot be maintained. Withdrawal of the rejection is respectfully requested.

In light of the foregoing, the Applicants respectfully submit that the entire application is now in condition for allowance which is respectfully requested.

Respectfully submitted,

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Exhibit A

第 3 図